

Notes on GiveWell's conversation with John Baez from 03/28/12:

GiveWell

Came across GiveWell through Lesswrong.com and also out of preexisting personal interest in charity evaluation. This interest developed out of the feedback that he received on a post endorsing Doctors Without Borders.

Had become interested in Doctors Without Borders through family interest, due to the fact that the reports seemed less “fluffy” than those of most charities and through encouraging news stories.

If he were to give \$1000 in the near future, would look at Doctors Without Borders and GiveWell's recommendations.

Interested in hearing GiveWell's take on views on philanthropy expressed within Less Wrong and views on SingInst.

AI risk

Believes that AI safety will be important in the future but that climate change and resource shortage are more pressing issues.

Doesn't find the argument “So little is being invested in AI risk and the consequences would be so large if near term AI research turned out to matter that at the margin AI risk should be getting more funding/resources” to be compelling.

Thinks that logic-based AI like AIXI is unlikely to be the first type of AI that's made and hasn't seen indications that strong AI is temporally near.

Does not believe that expected utility maximization is the right framework to use to think about these things. Remarked that Von Neumann – Morgenstern utility theorem assumes agents with far more computational power than real life agents have.

Current Work

Two projects

1. Trying to make applied math problems more appealing to pure mathematicians by recasting them in more “pure seeming” language & emphasizing the recurrent appearance of certain mathematical structures in applied problems. Gave the example of a parallel between quantum field theory and population biology which is little known

because so few people know both fields. Doing this with a view toward getting more brainpower working on real world problems.

2. Writing clear online expositions about climate models complete with interactive applications. Doing this with a view toward teaching people climate physics and the art of modelling, and again, getting more brainpower working on real world problems.

Climate Change and Resource Shortage

- GiveWell might find [Bill Gates' 2012 remarks on Climate Change](#) to be helpful in getting oriented.
 - Became convinced through readings that Peak Oil is one of the biggest problems that society faces. Recommends a blog titled [The Oil Drum](#). The general consensus is that around 2030 there will be a serious oil deficiency.
 - Peak Oil seems to be problematic in large part due to political ramifications – there's a danger that countries will end up fighting to maintain their respective standards of living rather than working together to solve problems.
 - The areas of research (related to both peak oil and climate change) that are most neglected may be the areas which environmentalists have negative associations with on account of their seeming “impure.” Examples:
 1. [Carbon sequestration](#) e.g. capturing carbon dioxide waste products from power plants, liquifying them and pouring them into ground.
 2. Nuclear power.
 3. Geoengineering.
 - Nuclear power seems to be the most rapidly scalable alternative energy source. There is room for research in [Generation III reactors](#) and specifically reactors that will shut down in the event of an accident rather than heating up and exploding. There's a possibility of using [Thorium as Nuclear Fuel](#), something which is less conducive to the development of nuclear weapons.
- China and India have been pursuing (1) and (2) whereas the US and Europe have not been doing so very much. Nuclear power remains unpopular in the US and Europe despite being advocated by [James Hansen](#) and [Stewart Brand](#).
- Geoengineering is currently viewed negatively because the (potential) costs of interfering with the environment are very salient. Baez believes that as climate change gets worse there may be a reversal of public opinion on this point.

There are experiments that one can do to determine what effects geoengineering efforts are likely to have (e.g. injecting sulfur dioxide into the atmosphere and examining how it diffuses, pouring iron compounds into the ocean with a view toward increasing plankton growth).

If not enough experiments are done by the time geoengineering seems critical, the geoengineering projects undertaken may not be safe.

Resources for GiveWell to talk to

- Possibly Gregory Benford - see [John Baez's interview with Gregory Benford](#).
- A potentially good general contact for GiveWell is [Rosa Wang](#) who “is a Special Projects Manager, working on innovative methods to mobilize capital to solve [large global problems](#).”
- Recommends talking with [Eric Drexler](#) and [Bruce Smith](#). Baez thinks that the potential of nanotechnology is underestimated on account of people dismissing it for being “too far out there.” This notwithstanding, doesn't find “gray goo” scenarios likely – thinks that that gray goo will have trouble competing with microorganisms honed by natural selection.
- Potentially good starting points for a literature review are the Azimuth Project pages on [Reports](#) and on [Plans of action](#).